



## **Economic Impact Analysis Virginia Department of Planning and Budget**

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### **12 VAC 5-581 - Sewage Collection and Treatment Regulations; Virginia Department of Health** February 25, 2000

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The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 9-6.14:7.1.G of the Administrative Process Act and Executive Order Number 25 (98). Section 9-6.14:7.1.G requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. The analysis presented below represents DPB's best estimate of these economic impacts.

### **Summary of the Proposed Regulation**

The proposed regulation provides standards for the design, construction and operation of sewage collection systems and sewage treatment facilities. This revision to the existing regulations is intended to bring the regulations into line with current best practices, to reduce the time required to license and build collection and treatment facilities, and to provide flexibility for applicants who wish to use designs different from those specified in the current regulations.

### **Estimated Economic Impact**

The economic impact of these changes to the sewage collection and treatment (SCAT) regulations can be usefully divided into two parts. First, there are the costs associated with the licensing process itself. The second set of costs are those associated with the design, construction and operation of the facilities themselves.

In the past, SCAT facility design, construction and operation have been regulated both by the Department of Environmental Quality (DEQ) and by the Department of Health (VDH). Under the new regulations, DEQ will no longer be involved in decisions about design, construction and operation. Rather, DEQ will limit its involvement to enforcing water quality standards and permitting while VDH will take the full responsibility for design review. This change will simplify the licensing process and will reduce the time it takes to bring a facility on line. The simplification of the process will ultimately result in significant savings on the costs of building and licensing new facilities. VDH has indicated that expenditures on SCAT projects represents nearly \$250 million per year. Reducing construction times could conceivably save on the order of a few million dollars per year.

Another significant cost saving in the new regulations is the provision that allows applicants to proceed with construction during the design review process. Most of the construction work that would be done concurrent with VDH review would be site preparation, an aspect of construction unlikely to be affected greatly by VDH review. Savings on the order of 6 months could be achieved and could possibly result in savings similar to those achieved by the licensing simplification process.

While the licensing process does add some to the cost of bringing new facilities on-line, the greatest part of the cost is due to expenses of designing, construction and operation. The question remains, what are the costs imposed by these regulations and the benefits that result. The primary function of SCAT facilities is for the protection of water quality and hence public health and safety. However, even in the absence of these regulations, anyone wishing to discharge effluents into state waters would have to treat wastes so that effluents would not result in violations of state water quality standards. The setting and enforcement of these standards is the responsibility of DEQ, not VDH. Thus, even in the absence of these regulations, SCAT facilities would be needed and would have to be built to use the best available technologies in order to allow effluents to meet standards established by the DEQ permit.

In fact, much of what is in these revised regulations is simply a restatement of best engineering practices in the field of wastewater engineering.<sup>1</sup> Few of the provisions of these regulations impose binding constraints on plant designers relative to what would be required to

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<sup>1</sup> Personal conversation with Dr. Clifford Randall, Virginia Tech, 2/22/00.

meet DEQ standards. It follows that the costs of building SCAT facilities are not primarily due to these regulations but to the water quality standards themselves.

The new VDH regulations contain numerous provisions allowing applicants to use technologies not specifically enumerated in the regulations. Applicants wishing to use innovative processes may substitute those processes for the processes listed in the regulations so long as the applicant can provide convincing data of and, in some cases, performance bonds to ensure that if the new process does not work, funding will be available to modify the design to bring it into compliance.

The design and building of these facilities is a complicated and specialized engineering task. All but the largest localities hire outside engineering firms rather than using in-house engineers. Localities may often find themselves without the technical expertise to evaluate the effectiveness of a given engineering proposal. These regulations make the process less risky for localities by specifying a set of design standards that will result in the facility performing as required. In addition, VDH Division of Wastewater Engineering review of plans offers localities an independent evaluation of plans. This independent evaluation may end up saving localities significant resources that would otherwise be spent on re-engineering facilities that fail to meet DEQ permit limits due to some design flaw.

In summary, SCAT facilities would need to be built to current best engineering practices to meet DEQ permit requirements. These revised regulations update SCAT facility standards to make them consistent with current best practices. In addition, the regulations clearly provide that applicants may use non-standard facilities so long as they 1) have data to demonstrate effectiveness, and 2) for more risky designs, can demonstrate the financial capacity to fix any problems if the new design does not perform up to expectations. This flexibility opens the door to innovation while still providing a clear minimum engineering standard for those applicants choosing to use standard practices. Relative to the standards being replaced, these changes may provide for significant cost savings in the design, construction and operation of SCAT facilities without posing any significant added risks to public health and safety.

## **Businesses and Entities Affected**

Any business or municipality wishing to construct or expand a sewerage system or treatment works over a minimum size must get a license. This includes nearly every

municipality in Virginia and many private businesses. VDH reports that it currently averages over 1,000 SCAT projects worth nearly \$250 million each year.

### **Localities Particularly Affected**

These regulations are not expected to have a disproportionate impact on any particular localities in Virginia.

### **Projected Impact on Employment**

While these regulations are expected to save money for applicants by shortening the time it takes to build facilities, it is not expected that the shorter construction schedules will result in any net change in the level of employment in the industry.

### **Effects on the Use and Value of Private Property**

Most of the impact of these changes will be felt by public agencies. There may be some savings by developers and other businesses needing to build SCAT facilities, although the amount of savings by private parties is not known and hence it is not possible to give a numerical estimate of any impact on the value of the private property affected.